

REMARKS

Applicants appreciate the Office's review of the present application. In response to the Office Action, the cited references have been reviewed, and the rejections and objections made to the claims by the Examiner have been considered. The claims presently on file in the present application are believed to be patentably distinguishable over the cited references, and therefore allowance of these claims is earnestly solicited.

In order to render the claims more clear and definite, and to emphasize the patentable novelty thereof, claims 1-3, 5-11, 13, and 17-19 have been amended, and new claims 21-23 have been added. Support for any claim amendments and new claims is found in the specification, claims, and drawings as originally filed, and no new matter has been added. Accordingly, all claims presently on file in the subject application are in condition for immediate allowance, and such action is respectfully requested.

Rejections

Rejection Under 35USC §112 Second Paragraph

Claims 9 and 17 have been rejected under 35 USC §112, paragraph 2, as being indefinite for failing to particularly point and distinctly claim the subject matter which the Applicant regards as the invention. In response, claims 9 and 17 have been amended to resolve the antecedent basis rejection by eliminating the term "molded" in reference to the "disk speed features".

In view of the foregoing, it is submitted that the rejections under 35 USC §112, paragraph 2, have been overcome and should be withdrawn.

Rejection Under 35USC §103

Claims 1-2, 4-5, 7-9, 11-13, 15-17, and 19-20 have been rejected under 35 USC §103(a),

as being unpatentable over U.S. patent application publication 2002/0191517 to Honda ("Honda") in view of U.S. patent 4,884,259 to Horikawa et al. ("Horikawa"). Applicants respectfully traverse the rejection and request reconsideration.

As to a rejection under §103(a), the U.S. Patent and Trademark Office ("USPTO") has the burden under §103 to establish a *prima facie* case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. See *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Manual of Patent Examining Procedure (MPEP) section 2143 discusses the requirements of a *prima facie* case for obviousness. That section provides as follows:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and reasonable expectation of success must be found in the prior art, and not based on applicant's disclosure.

The rejection of independent claim 1, and its dependent claim 4, is respectfully traversed for at least the following reasons. Claim 1 recites:

"1. (Currently amended) An optical disk drive, comprising:
a spindle motor to turn an optical disk;
an OPU to apply an image to a coating within a label region of the optical disk; and
an encoder, configured to track a plurality of substantially identical disk speed features on the optical disk in a region distinct from the label region and to thereby obtain disk speed data, the disk speed data ascertainable without tracking any other features on the optical disk."
(emphasis added)

The Office has not established a *prima facie* case of obviousness at least because the applied references do not teach or suggest all of Applicants' claim limitations.

The Office admits that “Honda does not disclose ‘an encoder, configured to track disk speed features on the optical disk in a region distinct from the label region and to thereby obtain disk speed data’” (Office Action, p.3). The Office further states that “Horikawa discloses an encoder (Fig. 5: 28), configured to track disk speed features (Fig. 1: 6) on the optical disk ... and to thereby obtain disk speed data (column 6, lines 48-68, wherein the encoder is additionally configured to track disk angular orientation features (Fig. 1: 5) molded within the distinct region” (Office Action, p.4). However, with regard to these marks 5,6, the Horikawa reference teaches:

“The optical memory disk 1 also has a starting reference mark 5 and a plurality (for example, 63) of angle reference marks, the marks 5, 6 being equally angularly spaced at angular intervals A along the outer circumferential edge of the disk 1. The marks 5, 6 can be detected by a reference mark position detector in the form of a photoelectric transducer, for example, when the optical memory disk 1 is rotated, and signals from the reference mark position sensor are used to determine angular positions of the optical memory disk 1. The marks 5, 6 may be of any desired shape insofar as they can produce different signals.” (col. 4, line 63 – col. 5, line 7; emphasis added)

“A reference mark position sensor 28 is positioned beneath the outer circumferential edge of the disk 1 for detecting the original and angle reference marks 5, 6 to issue reference pulses to a synchronous pulse generator 29. Since the marks 5, 6 total 64, the reference mark position sensor 28 produces 64 pulses per revolution of the disk 1.” (col. 6, lines 48-54)

The Horikawa reference thus discloses that both the single starting reference mark 5 and the 63 angle reference marks 6 must be detected in order to produce the 64 pulses per revolution that convey the disk speed information. There is no teaching or suggestion that disk speed information can be obtained using only the 63 angle reference marks 6. Since the starting reference mark 5 causes the position sensor to produce a different signal from the angle reference marks 6, the starting reference mark 5 cannot be substantially identical to the angle reference marks 6. The features of the present invention are neither disclosed nor suggested by the applied references in that all the features of the Horikawa reference that convey disk speed data are not substantially identical, and that other non-identical features on the optical disk must be used in order to convey disk speed data.

Furthermore, the Office has not established a *prima facie* case of obviousness at least

because there is no suggestion or motivation to modify the reference or to combine reference teachings. With regard to combining the Horikawa reference, the Office states that “The motivation would have been to improve the accuracy of the disk speed and angle measurement (reading these values directly from the disk is inherently more accurate than reading them indirectly from the spindle motor, as Honda does)” (Office Action, p.4). Applicants respectfully believe that a mere assertion of improved accuracy, in the absence of a specific teaching to that effect in one reference or the other, is just a conclusory statement of generalized advantages that impermissibly uses Applicants’ disclosure as a blueprint or in hindsight for the rejection.

Applicants respectfully traverse the Office’s assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the features recited in the claims of Applicants’ invention. Therefore, the rejection is improper at least for these reasons and should be withdrawn.

The rejection of independent claim 5, and its dependent claims 8-9 and 11-12, is respectfully traversed for at least the following reasons. Claim 5 recites:

“5. (Currently amended) A processor-readable medium comprising processor-executable instructions for labeling an optical disk, the processor-executable instructions comprising instructions for:

controlling a spindle motor within an optical disk drive to regulate angular speed of the optical disk;

interpreting output signals of an encoder resulting from sensation of a plurality of substantially identical disk speed features defined on the optical disk as the optical disk is spun by the spindle motor to produce disk speed data, each of the disk speed features spaced apart substantially equally in an annular ring on the optical disk; and

marking a coating on the optical disk with an OPU, wherein the OPU is operated according to the disk speed data.” (emphasis added)

The Office has not established a *prima facie* case of obviousness at least because the applied references do not teach or suggest all of Applicants’ claim limitations.

With regard to the operation of the encoder in sensing features on the optical disk, the Office refers to the rationale used to reject claim 1. As explained heretofore with regard to claim

1, however, all the features of the Horikawa reference that convey disk speed data are not substantially identical. In addition, unlike Applicants' invention in which each of the disk speed features 112 are spaced apart substantially equally in an annular ring on the optical disk (see Fig. 1), the 63 angle reference marks 6 of the Horikawa reference are not spaced apart substantially equally in an annular ring on the optical disk (as seen in Fig. 1, the angle reference marks 6 adjacent starting reference mark 5 have a different spacing between them than do others of the angle reference marks 6).

Furthermore, for the reasons explained heretofore with regard to claim 1, the Office has not established a *prima facie* case of obviousness at least because there is no suggestion or motivation to modify the reference or to combine reference teachings.

Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the features recited in the claims of Applicants' invention. Therefore, the rejection is improper at least for these reasons and should be withdrawn.

Independent claim 13 (currently amended) recites limitations similar to those of claim 5, discussed above.

For similar reasons as explained heretofore with regard to claim 5, the features of the present invention are not taught or suggested by the cited references in that the features of gathering disk speed data by tracking a plurality of substantially identical disk speed features defined on the optical disk, where each of the disk speed features is spaced apart substantially equally in an annular ring on the optical disk are neither taught nor suggested by the Honda reference in combination with the Horikawa reference.

Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the features recited in the claims of Applicants' invention. Such could be possible only in hindsight and in light of Applicants' teachings. Therefore, the rejection of independent claim 13, and its

corresponding dependent claims 15-17 and 19-20, is improper at least for that reason and should be withdrawn.

The rejection of dependent claim 2, which has been amended to depend from newly-added independent claim 21, is respectfully traversed for at least the following reasons. Claim 21 recites:

“21. (New) An optical disk drive, comprising:
a spindle motor to turn an optical disk;
an OPU to apply an image to a coating within a label region of the optical disk; and
an encoder configured to track disk speed features on the optical disk in a region distinct from the label region so as to thereby obtain disk speed data, the disk drive further configured to track disk angular orientation features on the optical disk so as to thereby obtain angular orientation data, the disk angular orientation features different from the disk speed features.”
(emphasis added)

Any prospective rejection of claim 21 would be improper, at least because the applied references do not teach or suggest all of Applicants’ claim limitations.

The Honda reference does not disclose an encoder configured to track disk angular orientation features on the optical disk in a region distinct from the label region. The Office states that the encoder of the Horikawa reference is “configured to track disk angular orientation features (Fig. 1: 5) molded within the distinct region” (Office Action, p.4).

However, for similar reasons as explained heretofore with regard to claim 1, the disk angular orientation features of the Horikawa reference are not different from its disk speed features, as required by claim 21. Instead, the Horikawa reference teaches that starting reference mark 5 is used to determine both the disk speed and the angular orientation. Accordingly, the features of the present invention are neither disclosed nor suggested by the applied references in that the disk angular orientation features of the Horikawa reference are not different from the disk speed features.

Furthermore, any prospective rejection of claim 21 would be improper at least because there is no suggestion or motivation to modify the reference or to combine reference teachings, for the

reasons explained heretofore with regard to claim 1.

Because dependent claim 2 depends from independent claim 21, Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the features recited in the claims of Applicants' invention. Therefore, the rejection of claim 2 is improper at least for these reasons and should be withdrawn.

The rejection of dependent claim 7, which has been amended to depend from newly-added independent claim 22, is respectfully traversed for at least the following reasons. Claim 22 recites:

"22. (New) A processor-readable medium comprising processor-executable instructions for labeling an optical disk, the processor-executable instructions comprising instructions for: controlling a spindle motor within an optical disk drive to regulate angular speed of the optical disk;

interpreting output signals of an encoder resulting from sensation of disk speed features defined on the optical disk as the optical disk is spun by the spindle motor to produce disk speed data;

tracking disk angular orientation features defined on the optical disk and different from the disk speed features to produce disk angular orientation data; and

marking a coating on the optical disk with an OPU, wherein the OPU is operated according to the disk speed data and the disk angular orientation data." (emphasis added)

For similar reasons as explained heretofore with regard to claim 21, the features of the present invention as recited in claim 22 are not taught or suggested by the cited references, and any prospective rejection would be improper, in that the features of tracking disk angular orientation features defined on the optical disk and different from the disk speed features to produce disk angular orientation data are neither taught nor suggested by the Honda reference in combination with the Horikawa reference.

Because dependent claim 7 depends from independent claim 22, Applicants respectfully traverse the Office's assertion that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the features recited in the claims of Applicants'

invention. Therefore, the rejection of claim 7 is improper at least for these reasons and should be withdrawn.

Claims 3, 6, and 14 have been rejected under 35 USC §103 (a), as being unpatentable over U.S. patent application publication 2002/0191517 to Honda ("Honda") in view of U.S. patent 4,884,259 to Horikawa et al. ("Horikawa"), and further in view of U.S. patent 6,109,324 to Bugner et al. ("Bugner"). Applicants respectfully traverse the rejection and request reconsideration based on the dependence of these claims on independent claims 13, 21, or 22, whose reasons for allowability over the Honda and Horikawa references have been discussed heretofore and against which the Bugner reference has not been cited.

Claims 10 and 18 have been rejected under 35 USC §103 (a), as being unpatentable over U.S. patent application publication 2002/0191517 to Honda ("Honda") in view of U.S. patent 4,884,259 to Horikawa et al. ("Horikawa"), and further in view of U.S. patent 5,670,947 to Nagashima ("Nagashima"). Applicants respectfully traverse the rejection and request reconsideration based on the dependence of these claims on independent claims 5 or 13, whose reasons for allowability over the Honda and Horikawa references have been discussed heretofore and against which the Nagashima reference has not been cited.

Formalities

Amendment of the Specification

Paragraph [0001] of the specification has been amended to supply the missing cross-referenced co-pending US application serial number, as requested by the Office.

Claim Objections

Claims 8, 9-11, and 17-19 have been objected to because of informalities. In response,

claims 8, 9-11, and 17-19 have been amended in a manner consistent with the suggestions of the Office, and it is therefore believed that these amendments resolve the objections.

Conclusion

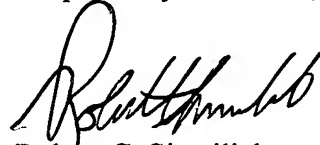
Attorney for Applicants has reviewed each one of the cited references made of record and not relied upon, and believes that the claims presently on file in the subject application patentably distinguish thereover, either taken alone or in combination with one another.

Therefore, all claims presently on file in the subject application are in condition for immediate allowance, and such action is respectfully requested. If it is felt for any reason that direct communication with Applicant's attorney would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned Robert C. Sismilich, Esq. at the below-listed telephone number.

**AUTHORIZATION TO PAY AND PETITION
FOR THE ACCEPTANCE OF ANY NECESSARY FEES**

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Respectfully submitted,



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